REMARKS

Applicant has amended claims 1 and 12. Applicant has added new claims 26, 27, 28, and 29.

(1) The Office Action rejected claim 12 asserting that the specification does not provide enablement for a pharmaceutical agent for the diseases as set forth in the claim. The action further asserted that the specification does not provide sufficient evidence that the compounds are useful for the treatment of the diseases set forth in claim 12. In response, applicant has restricted claim 12 to a pharmaceutical agent for the therapy of cancer. The fact that the compounds described in claim 12 have an activity of suppressing the growth of cancerous cells is demonstrated in Examples 2-6 and 11 in the present specification.

(2) Claims 26-29 were added to recite treatment for the physiological activities, other than suppression of the growth of cancer cells, correlated with specific compounds previously listed in claim 12.

a. The activity claimed in claim 26 is demonstrated in the specification in example 14 and page 24-25, which shows that 4,5-dihydroxy-2-pentenal has an inducing activity of the IGF-1 production that has been used as a therapeutic agent for diabetes milletus II and dwarfism.

b. The activity claimed in claim 27 is demonstrated in example 15, where tests showed a significant inhibition of growth of rheumatism cells.

c. The activity claimed in claim 28 is demonstrated in example 17 and lines 9-18 on page 28 of the specification where the compound is shown to

d. The activity claimed in claim 29 is demonstrated by example 18 and lines 3-13 on page 31 of the specification wherein the compound induces the activity of heat shock protein, which can have an anti-inflammatory effect.

These new claims are more specific versions of previous claim 12, so they do not raise new issues, and are appropriately allowed after final.

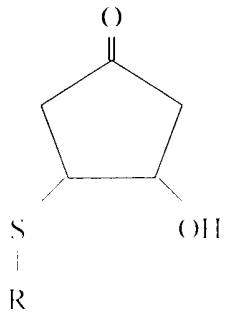
(3) The Office Action rejected claims 1-10 and 16-25 under 35 U.S.C. 102(b) as anticipated by, or in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent 5,015,296 to Dobler or U.S. Patent 5,792,868 to Izawa. None of the compounds of claim 1 having an apoptosis-inducing ability is disclosed or suggested in the cited references. Dobler discloses a continuous epimerization process whereby pentose is heated. Izawa heats ribonucelosides to create acyclic nucleosides and separate purine nucleosides. Neither reference discloses all elements of the claims, and therefore neither anticipates this invention. Further, neither reference teaches the manufacture of a substance having apoptosis-inducing ability.

(4) The Office Action asserted that both Dobler and Izawa disclose purification steps. In response, the applicant has amended claim 1 to remove the purification step.

(5) The Office Action rejected claims 11, 12, and 14 as anticipated or obvious from U.S. Patent 6,184,381 to Ikariya and U.S. Patent 5,984,882 to Rosenschein. Ikariya disclosed 4-hydroxy-2-cyclopenten-1-one, but does not teach the apoptosis-inducing ability. Rosenchein disclosed a method of inducing apoptosis of cancer cells by applying ultrasonic energy in

use of the compounds recited in claims 11, 12, 14 for their apoptosis-inducing activity. Nothing in either reference suggests combining the two to achieve apoptosis-inducing activity by using the named compounds. Rosenchein, instead, teaches a way to induce apoptosis with a different method.

(6) The Office Action further argues in response to applicant's point that Ikariya and Rosenchein do not disclose the apoptosis-inducing ability of the present invention, that "a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." But, neither reference discloses the compounds of the claims. Claim 11 recites the following apoptosis-inducing compounds that are not disclosed in either Rosenchein or Ikariya: 4-(9-adeninyl)-2-cyclopenten-l-one, 4-(9-guaninyl)-2-cyclopenten-l-one, 1,5-epoxy-l-hydroxy-3-penten-2-one, 2-(3,4-dihydroxy-l-butenyl)-4-(2-formylvinyl) -1,3-dioxolane, and the compound represented by the following formula [I]



[I]

Therefore, the claims do not read on either Rosenchein or Ikariya. Since the references are not anticipatory, the assertion that the prior art inherently has the same activity is flawed. Further, the fact that this is an unrecognized ability that has not been discovered by those

1026 (1984). It is impermissible hindsight to suggest this is obvious when applicant is the first to disclose these abilities.

The Applicant submits that by this amendment he has placed the case in condition for immediate allowance and such action is respectfully requested. However, if any issue remains unresolved, Applicant's attorney would welcome the opportunity for a telephone interview to expedite allowance and issue.

Respectfully submitted,

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